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IS RUSSIA A THREAT TO ESTONIAN ENERGY SECURITY?

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ABSTRACT

This study examines whether Russia is a threat to Estonia's energy security as well as how Estonia has reacted to Russia as an energy supplier. The authors use Stephen Walt's balance of threat theory as a framework to understand the potential of Russia as a threat, as well as how Estonia has reacted. The balance of threat theory is chosen because it effectively establishes when states view others as a threat and how they react. The focus of the work is on Estonia's dependence on Russian natural gas and the great lengths Estonia has gone to be energy self-sufficient. The article concludes that Estonia can and does see Russia as a threat to its energy security and has taken significant measures to reduce its dependency on Russia as an energy supplier.

INTRODUCTION

In this article, we will investigate whether Estonia sees Russia as a threat to its energy security and if so, how Estonia has reacted to this threat. The framework for this analysis will be Stephen Walt's balance of threat theory. This theory gives a good understanding of when and how states view others as a threat and how they respond. This article will focus specifically on Estonia's reliance on Russian gas and what policy decisions Estonia has taken in response. The lessons learned from applying this theoretical framework to Estonia could go a long way in analyzing the threat level of states as energy suppliers and in analyzing the state behaviour in energy policy.

Energy security is a very important topic for Europe, and Russian gas imports are at the heart of the conversation. Russian gas imports have been a concern for many countries, particularly those of Eastern Europe. This work will focus on Russia's natural gas transit policies to determine whether they are a threat to Estonia's energy security. While Russia is also a heavy supplier of oil, this aspect will not be analyzed in detail because only as a gas supplier does Russia potentially pose a threat to Estonia's energy security. Oil can be transported easily by tankers and can be purchased from many sources. Gas requires an important infrastructure that links a consumer to a producer. [1]

The Estonian Ministry of Foreign Affairs has stated that definitions of energy security vary depending on the country or organization (Estonian ministry of Foreign Affairs 2011). The ministry also brings out several main principles that are meaningful for their energy security: reliability of supply, self-sufficiency, security of infrastructure, stability and diversity of suppliers, and diversity of energy carriers (ibid.). All these factors seem to point towards Russia as the

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biggest threat to Estonian energy security. Of course, one factor not explicitly mentioned here is price stability. For the purpose of this work, we will define energy security as "a condition in which one country…has access to sufficient energy resources at reasonable energy prices for the foreseeable future free from any serious risk of major disruption of service" (Biresselioglu 2011: 19). This definition is practical and especially relevant regarding Estonia's energy situation.

Many authors have written on European energy security in the Baltic Sea region in the past. Giving a brief overview of the more important works will better explain where this article fits into the picture. Eiki Berg wrote an article in "The EU, Russia and the Dialogue on Northern Energy Resources", edited by Pami Aalto, detailing the Baltic States' role in energy transit in the Baltic Sea Region. All three states constitute a transit corridor, but they all approach the transit sector differently: Estonia focuses on shipping from the port of Tallinn, Latvia has an efficient rail system, and Lithuania has a refinery which makes energy transit cost-efficient. E. Berg also goes on to say that the transit sectors in each country are going in different directions. The way the countries view Russia's role in the transit sector is different in all three countries. Russian owners and investors are greeted with different levels of skepticism, Estonia being the highest and Latvia being the lowest. The states also have different long-term plans for the transit sector. Latvia has a comprehensive transit strategy which has helped its sector. The same is not true for Estonia and Lithuania. This is different than how things work in Russia where companies always work in unity with the government to reach both the economic and political goals (Berg 2007: 145,153–154,157).

Juhani Laurila wrote an article in 2003, looking at Russian investments in the Baltic Sea Region to gain a better understanding of Russian strategies in the region. The article makes good observations that not all of Russia's decisions are cost-effective and thus have other motives as well. Often Russia is willing to invest largely into domestic projects rather than to upgrade the infrastructure in other states. It was clear that in the short term the projects were not cost-effective. Laurila concludes that Russia's willingness to pay such a high price for energy transit projects shows that Russia wants to have a direct transport link to the Western Europe, invest in the St. Petersburg region, and gain political leverage over the Baltic States (Laurila 2003: 53).

Two other articles this study also relies on reflect the general trend in the literature on the subject. Andres Mäe's "Estonia's Energy Security and the EU" gives many details on Estonian energy security, taking into account the EU regulations and Russia as a supplier (Mäe 2007). Merle Maigre's policy paper also outlines Estonia's concerns regarding Russia (Maigre 2010). The underlying feature of many of the works on energy security is a lack of International Relations theory.

When analyzing energy security, there are many studies that bring out statistics and quality descriptions of the consumer–producer relationship, but there is surprisingly little studies that connect energy security to IR theories. Perhaps this reflects the general trend of theory fatigue and a desire for more practical studies. Though IR theories can sometimes seem abstract, they are by no means impractical. They give us the ability to understand and explain the world around us. If we take into account only statistics and focus on specific situations, we will be always short of a greater understanding.

This paper aims at contributing to the existing literature on energy security by adding neorealism, one of the more dominant IR theories, to the discussion. This theory will give us a better understanding of state behaviour in the energy sector and will show that IR theory still has a relevant place in understanding state behaviour. The next section will introduce the theory and its application in the article. The following sections will analyze whether Russia as an energy producer is a threat to Estonia and then whether Estonia has reacted as if Russia is a threat. The conclusions raised will enable us to better understand state behavior and state relations in the energy sector and will demonstrate the utility and viability of an important IR theory.

BALANCE OF THREAT THEORY

Neorealism's ability to explain and predict state behaviour has been studied and debated quite extensively. Given the focus Neorealism plays in state security, much of the material has been focused on hard security issues, such as war and the use of military force. Many issues of soft security are recent developments, such as energy security, and have not been studied extensively. Robert Keohane has stated that our changing world and values mean that theories can lose their validity, even if they are currently credible (Keohane 1986: 5). This has led many to prematurely discard neorealism as a cold war theory that has lost its usefulness. To see if neorealism can maintain its validity in the changing world, we must test it in the current situations and circumstances.

Much of the criticism towards neorealism is due to the fact that neorealist scholars have not advanced their research agenda to match the changing world. John Ravenhill has said: "Realists have never considered economic interactions to be significant in international relations, save in their role as a component of national power" (Ravanhill 2010: 540). This article rides on the idea that the problem with neorealism is not the key theoretical assumptions, but the limited application of those assumptions. The main assumptions of neorealism are very much in play in the energy sector. Joseph Grieco sums up neorealism in five principles: first, states are the primary actors in today's world; secondly, states behave as rational agents due to the international environment which renders states sensitive to the costs of their actions; thirdly, the international system is a system of anarchy or a self-help system; fourthly, in this system, states are most concerned with security and power, which can lead to conflict and a lack of international cooperation; lastly, international institutions only play a marginal role in the international system (Grieco 2007: 118–119).

In the energy sector, we see that most of the major energy companies in energy-producing countries are state-owned. In Russia, this is particularly evident where the state-owned energy companies carry out the will of the state. Decisions in energy politics are also rational, but not in the economic sense of always trying to maximize profit, but in the sense of increasing the power, influence, and profit of the state. Despite the growth in international organizations since the end of the Cold War, states are still able to do what they want without major repercussions. This is especially true of an energy producer like Russia. A gas shutoff for a week or two will cost Russia a minimal amount of money in terms of lost revenue. But this same shutoff for a week or two can have monumental consequences for a country which is in need of the energy.

One of the sub-theories of neorealism is Stephen Walt's balance of threat theory. This theory gives us a solid framework for analyzing whether or not Russia is a threat to Estonia's energy security. The theory was created during the Cold War and was used for analyzing military threats. The underlying assumptions and framework for the theory are still very much applicable in this new area of security threats. The balance of threat theory stems from the neorealist conception of the balance of power theory. Neorealism assumes that states are the major actors and have a desire to survive (Waltz 1979: 118). Also, neorealism assumes that the international system is anarchic because there is no world government or any meaningful mechanism of enforcing rules. Because states are unchecked, they cannot be trusted, and states have to fend for themselves (Walt 1998: 31). This causes states to balance against others to prevent them from becoming too powerful. The other option left to states is tor bandwagon with a state if there are no other options. While the logic of this theory seemed sound, its ability to predict state behaviour was unimpressive. Power was not the only factor states took into consideration when choosing alliances.

Stephen Walt recognized these shortcomings and formed the balance of threat theory, stating that states balance against perceived threats and not against powerful states. A state posing a threat may or may not be powerful. Walt gives four factors that affect the threat level a weak state feels from another state: aggregate power, proximity, offensive capability, and offensive intentions (Walt 1985: 9). If there is a significant threat level in some or all of these areas, then balancing would be the expected outcome for a state. These four factors give us a solid framework to analyze whether Russia is a threat to Estonia's energy security. While Walt tended to focus on the military aspect, we will adapt his factors and focus on the energy aspect.

When analyzing whether Russia is a threat to Estonia's energy security, the concept of threat needs to be established. For the purposes of this study, a threat will mean anything that could cause a disruption to reasonable energy prices or a disruption of energy supply. This is based on our definition of energy security. This definition of threat is broad and includes natural risks to supply, which could be prevalent in any energy relationship, as well as political threats that may be more prevalent in relationships with Russia. Since the impact of both natural risks and political threats to Estonia's energy security will be the same, this study will take both risks and threats into consideration and treat both of them as threats to Estonia's energy security.

The first factor, aggregate power, then, is a state's general power regarding the energy sector. This includes both energy resources as well as energy transit abilities. We will focus specifically on the gas industry, as this is the industry that influences Estonia most. The second factor, proximity, will focus on the geography of energy, not just on the geography of the country. An important part of this factor is the energy transit sector. This will help us answer the question how the energy is close to Estonia. The second question of equal value is how far away other energy sources are. This addresses the issue of being dependent on the Russian energy.

The third factor, offensive capability, will focus on Russia's ability to achieve its energy agenda; the transit sector will again be an important aspect. The key focus of this section will be the Nord Steam pipeline which could potentially give Russia the infrastructural ability to sell gas to Western Europe while cutting or decreasing the flow of gas to Eastern Europe. The final factor,

offensive intentions, will analyze to what degree Russia will use energy and energy transit as a political weapon. This section will look at some of the gas disputes which have caused many to accuse Russia of using gas as a political weapon.

If these four factors determine that Russia is a threat to Estonia's energy security, then according to the balance of threat theory, Estonia should balance away from Russia as an energy supplier. The second section of this work will analyze whether Estonia has balanced or attempted to balance away from Russia as an energy supplier. To do this, we will focus on Estonia's effort to increase the national sources of energy as well as international sources of energy other than Russia.

RUSSIA AS A THREAT TO ESTONIA'S ENERGY SECURITY

One factor that contributes greatly to Estonia's energy security is its high level of domestic energy production. Estonia uses oil shale as its primary source of electrical energy. In total, Estonia 66% of its energy needs (Mäe 2007: 93). However, there are other factors that could potentially lead to energy security problems for Estonia. These stem, in large part, from the old Soviet energy system. The energy infrastructure in Estonia is tied to Russia. This means that all natural gas consumed in Estonia is imported from Russia (ibid.: 102). Gas consumption is not an overly large portion of energy consumption, (15%), but it is still significant (ibid.). This section will analyze whether dependence on the Russian natural gas is a threat to Estonia's energy security.

Aggregate power

Russia has often been called an energy superpower, which is a good indicator of its aggregate power in the energy sector. If one takes into consideration the Arctic, then Russia has 33–40% of the world's gas reserves (Yegorov and Wirl 2008: 308). Of course, gas in the Arctic, the Yamal gas reserve, for example, is very difficult to extract. It is extremely difficult to build the proper infrastructure and transportation links due to the harsh climate conditions (Overland 134: 2008). Nevertheless, Russia is still a natural gas giant. It holds the largest reserves in the world (Cohen 2007: 382), and some of the gas reserves are in very profitable places (Yegorov and Wirl 2008: 314). Gas from these reserves is transported to Europe by pipelines.

In addition to the huge amount of gas that Russia has, the second factor that shows Russia's aggregate energy power is the state ownership of the gas. The state-owned company "Gazprom" holds a monopoly over the many gas fields and the transit of gas (Aslund 2010: 152–153). Russia's prosecution of the Yukos oil company resulted in a transfer of large energy fields into state-owned companies. The Duma also passed a law in 2006 that limited foreign participation in certain energy companies to 49 percent (Mäe 2007: 95). This leaves business decisions ultimately in the hands of Russia who may or may not act in the same way as traditional shareholders. For the states that are entirely dependent on Russia for gas, such as the Baltic states, Russia's aggregate energy power is enormous. This is important because, as Walt said, "the overall power that states can wield is thus an important component of the threat they can pose to others" (Walt 1985: 10).

Proximity

The second factor, proximity, is also important because "the ability to project power declines with distance" (ibid.). This is also true in the energy sector. Russia has seen that transit states (namely Belarus and Ukraine) hold a significant amount of leverage over Russia's energy transit policies. Russia has attempted to undergo a strategy to limit their leverage or decrease the 'distance' between supplier and customer, in this case Western Europe. The physical distance, of course, cannot be decreased, but the infrastructure can be changed so that the proximity of Russian gas is closer.

Many countries in Europe have access to other sources of gas, such as Great Britain, Norway, Northern Africa or even the Middle East. These states most likely view Russian energy differently than Estonia. In Estonia's case, Russia's energy is not just close geographically and connected by the infrastructure, but also alternative sources are far away. Estonia's energy infrastructure is isolated from the rest of the EU (Mäe 2007: 93). Although changes to the integration of the electrical grid are taking place, changes in gas infrastructure are a long way off. For the foreseeable future, not only will Russia continue to have a close proximity to Estonia in terms of energy, but also the other sources will remain far away. This close proximity can also be seen as a factor for Estonia to see Russia as a threat.

Offensive power

The third factor discussed by Walt is offensive power. A close powerful state does not constitute a threat. A close powerful state with offensive capabilities can change the picture. In a traditional war, offensive power might be measured in rockets, transport capabilities or some other type of military indicator. In energy security, we use offensive power to mean the ability to use energy as a political tool, or the ability to use energy to influence state behaviour. Here, we will discuss the Nord Steam Pipeline and the impact it will have on Russian abilities to use energy as a resource to influence state behaviour.

The Nord Stream Pipeline is a 1,200 km long dual flow natural gas pipeline that runs under the Baltic Sea, connecting Vyborg (Russia) and Greifswald (Germany) (Whist 2009: 77). When looking at the European energy market as a whole, there are actually many positives about the Nord Steam pipeline. It would increase the amount of gas Europe would be able to import from Russia. While many see this as a negative factor, the European demand for natural gas is only growing. This also provides a second route for the gas which would increase the reliability of Russian gas for Western European states. The pipeline will make transit of gas cheaper from the Yamal and Shtokman gas fields in the Arctic (Chyong et al. 2010, 10, 38). These gas fields are much closer to the Nord Stream pipeline than the Ukrainian pipeline where currently most of Russian gas is transported to. This will reduce gas prices for the consumer and raise profits for the producer when production begins in these gas fields.

There were also other land pipeline proposals that would also fulfil the above-mentioned positives of an additional pipeline closer to the Arctic gas. The Yamal-2 pipeline through Belarus and the Amber pipeline through Latvia, Lithuania and Poland were rejected in favour of the Nord Stream Pipeline (Whist 2009: 96). Many analysts believe that the costs of building and

maintaining a land pipeline are much cheaper, leading many to wonder why Russia chose the undersea route. Many are skeptical of Russia's intentions. While it is easy to see that Russia will save on transit fees and avoid potential political headaches that a transit state could cause, many believe that this will divide Europe, giving Russia offensive capabilities towards Eastern Europe. Russia would be able to turn off the gas to Eastern Europe via the Ukrainian and Belarusian pipelines, while keeping gas flowing to Western Europe via the Nord Stream Pipeline. Under the current arrangement, Russia cannot cut off the gas to Eastern Europe and continue to supply it to Western Europe because the gas goes through Eastern Europe.

There are several scenarios where Russia could choose to supply gas to Western Europe and not to supply it to Eastern Europe. The first is a political dispute where Russia would turn off the gas to punish or exert pressure on certain countries. One study has shown that Russia has used energy as a political tool more than 55 times since 1991 (ibid.: 99). There are various ways Russia can do this: "supply interruptions, explicit threats, coercive pricing and hostile takeovers of infrastructure or companies" (ibid.). Given some of the political disputes Estonia has been in with Russia, and Russian reactions to those disputes, it is understandable that Estonia would be concerned with Russia's offensive capabilities in the energy sector.

Another scenario where Russia would cut the gas to Eastern Europe but not to Western Europe has nothing to do with a political dispute. Many are concerned that Russia is investing too much in pipelines and not enough in gas fields. There is a concern that demand will outgrow supply (ibid: 103). Although the demand dropped sharply during the global financial crisis, most expect demand to continue growing in the future. The European gas supplies are decreasing, while the demand is increasing. The Chinese and Japanese demand for Russian natural gas is also increasing. This could create a situation where Russia has to choose whom to sell gas to in times of gas shortage, such as a cold winter, for example. In this scenario, they could continue to sell gas to Germany via the Nord Stream pipeline at a full capacity, while gas going through the Belarus and Ukrainian pipelines could be shut off or significantly decreased. For Russia, Germany would be a more important customer and would be a better business choice than Eastern European countries. Estonia is in the same predicament as many Eastern European countries. A gas shutoff, even for a short time, would have serious consequences for Estonia because Russia is the only supplier of natural gas. Large blocks of houses and apartment buildings are heated by gas (Mäe 2007: 109); a shortage of gas during the cold winter months would be problematic for many residents.

The Nord Stream Pipeline is a major infrastructural change in the gas transit sector. When looking at European energy needs as a whole, the pipeline should not be seen as anything controversial. It provides another transit route to Europe, which increases the transit capabilities to Europe. It also makes transporting the Arctic gas to Europe cheaper by decreasing the transport distance. However, to many Eastern European countries, including Estonia, the pipeline gives Russia more opportunities to transport or not to transport gas. In this section, we brought out two scenarios where Russia could choose to transport gas through the Nord Stream Pipeline to Germany but not to Eastern Europe through Belarus or Ukraine. Both scenarios seem plausible for Estonia. Estonia has been in dispute with Russia before, particularly

concerning the Bronze Soldier incident, and in January 2012, during a cold freeze, there was a shortage of gas to Europe because Russia's domestic demand was very high (BBC News 2012). The Nord Stream Pipeline greatly increases Russia's offensive power.

Offensive intentions

The fourth and most important factor in determining whether a state sees another state as a threat is offensive intentions. If a state is close, powerful and has offensive capabilities, this does not yet mean that a state is a threat. In this situation, there could be a very good cooperation, such as in the case of the USA and Canada, or the USA and Mexico. What makes a state a threat is these three factors plus the fourth factor of offensive intentions. How likely is a state to use the offensive power? In our energy security context, we must ask the question: how likely is Russia to use its energy in a way that would threaten Estonia's energy security.

As mentioned above, since 1991 Russia has been accused of using energy as a political tool on over 55 different occasions (Whist 2009: 99). The Russian gas was shut off to Estonia in the winter of 1992–1993 due to tense political relations; since then, there has been no disruption of gas to Estonia (Mäe 2007: 93). Despite the stability in gas delivery to Estonia, there can still be reasons for Estonia to suspect Russia of having offensive intentions regarding its energy policy. Russia's status regarding international law brings mixed results. Russia has recently joined the WTO, the fact that should bring stability and neutrality to the Russian economic policy, but Russia has not yet ratified the energy charter. When looking at Russian gas relations with its neighbours, it is easy to see how one could perceive Russia as a threat. There have been several gas disputes with Belarus and Moldova, which could be interpreted as being politically motivated. We will instead focus on the wider profile gas disputes between Russia and Ukraine in 2006 and 2009.

Russia has traditionally supplied Ukraine with subsidized gas. In the 2005 Presidential elections, the pro-Western candidate Viktor Yushchenko came to power in what is now called the Orange revolution. Russia was skeptical about the US's role in the Orange revolution and sought to increase the price of gas despite the existing agreement that guaranteed gas at $50 per thousand cubic meters (tcm) (Nichol et al. 2006: 2). Gazprom asked for a price increase to $230 tcm, which was rejected as too sharp an increase. Russia offered Ukraine a loan to pay for the increase, which was also rejected (ibid.). This resulted in Russia's decision to cut off gas supplies to Ukraine. Ukraine then used the gas that was intended for other European costumers (ibid.). Putin stated that he had no desire to sell cheap gas to "Orange forces" (Woehrel 2010: 8). While it may seem logical for Russia to stop subsidizing gas to a pro-Western government, many saw this as a political move to punish Yushchenko and to convince the Ukrainian electorate to support the pro-Russian candidate Yanukovych in the March 2006 parliamentary elections, whose party artually won the election (ibid.).

The Russian–Ukrainian gas relations remained good until Yanukovych was no longer the prime minister. In December 2007, Julia Tymoshenko was elected Prime Minister. Just over a year later, Russia again shut off the gas to Ukraine on 1 January 2009 (ibid.). The dispute was again over price, but also over an alleged gas debt owed by Ukraine to Russia. Ukraine used

the gas intended for other European customers, and Russia shut off the entire gas supply on 6 January; gas supplies resumed 12 days later (ibid.). One of Russia's goals in negotiations was to gain control of Ukraine's transit infrastructure. They were not successful, which also helps understand why Russia would build the Nord Stream pipeline. These two events demonstrate how a political dispute was carried over to the energy sector and resulted in a gas shutoff.

Upon analyzing Walt's four factors, we can conclude that Estonia can indeed see Russia as a threat to its energy security. Russia possesses an enormous amount of aggregate power in both energy resources and state control over these resources. Russia's proximity to Estonia is close because of the old Soviet energy infrastructure which links the countries, as well as their status as neighbours. This same Soviet legacy is what makes alternate energy sources distant. Russia's offensive capabilities, or capabilities to use energy as a political tool, are significantly enhanced by the Nord Stream pipeline and by Estonia's complete dependence on Russia as a natural gas supplier. Russia's offensive intentions can also be regarded as a threat, given the hostile energy relations with other East European countries.

Estonia has no such a complicated energy relationship with Russia as Ukraine does. But the main argument of the Ukrainian example is that the decision to cut off gas was a political decision. Estonia does not have to worry about ownership or transit issues as Ukraine does, but the example of Ukraine is still relevant to Estonia, given the complicated political relationships between Estonia and Russia. Estonia tends to see these incidents not as a byproduct of unreliable transit states but as a result of a bully neighbour who uses energy as a political tool. The Bronze Soldier incident proved how fragile and complicated Estonia's relationship with Russia is. Russia's politically motivated decision to shut off the gas flow in Ukraine means that Estonia has to prepare for the potential scenario in which Russia would be politically motivated to shut off the gas to Estonia as well. Given this conclusion, according to Walt's balance of threat theory, Estonia will then balance against Russia as an energy supplier.

ESTONIAN ENERGY POLICIES TOWARDS RUSSIA

The above section has detailed how, according to Walt's balance of threat theory and realist assumptions, Estonia should see Russia as a threat. According to Walt, if a state views another state as a threat, then it acts to balance against that state. However, Walt does leave option for a state to bandwagon with a threat when there are no other options available (Walt 1985: 11). Being a member of the EU and NATO and providing a significant amount of its energy domestically, Estonia cannot be considered in this camp. This section will first state the case for bandwagoning, or increasing Estonia's reliance on Russian gas to show the feasibility of such a policy. It will then analyze Estonia's energy policies towards Russia and demonstrate how Estonia has actually balanced against Russia as an energy supplier. Specifically, this section will highlight Estonia's energy security strategies, both domestic and foreign. Domestically, we will look at Estonia's policies towards the domestic production of oil shale as well as other sources of energy such as wind farms, liquefied natural gas, and nuclear energy. Lastly, we will look at Estonia's strategy of integrating its energy system with Finland. These events will give us a solid overview of Estonia's energy security policy towards

Russia as an energy supplier and will enable us to make conclusions that Estonia is balancing against Russia as an energy supplier.

When looking at the energy portfolio of a country, it is difficult to cherry-pick specific energy policies that are directly related to Russia's natural gas imports. Often, the energy production of one source is related to another. There are also many reasons why the state undertakes certain energy strategies, only one of them being a reaction to the Russian threat. This section will take a holistic approach to analyzing Estonia's energy strategies to avoid an overly narrow focus, which could leave out some important elements of Estonia's energy strategy. It will also highlight the role of the Russian threat in Estonia's energy strategy.

The case for bandwagoning

Oil shale is the largest source of Estonia's domestic energy production and accounts for approximately 60% of Estonia's total energy consumption (Maigre 2010: 3). Estonia is actually the only country in the world that relies on oil shale as its primary source of energy (ibid.: 2). For Estonia, this is problematic as oil shale is a dirty source of energy. It releases a high level of CO_2 gas when burned and also creates a large amount of ash (ibid.: 3). According to the EU rules, this means that Estonia will either have to drastically reduce the use of oil shale or invest heavily in an expensive technology to make the process cleaner (ibid.).

The first option of reducing the amount of oil shale would mean that Estonia would have to increase the import of energy. The Estonian government estimates that under this scenario the percentage of energy from oil shale would drop from 60% to 30% (ibid.). Other domestic energy sources would not be able to make up this much of a difference. One of the options for imported energy would be to increase the amount of natural gas imported from Russia. Currently, this makes up around 15% of Estonia's consumed energy, which could be easily increased to compensate for a decrease in oil shale production. The current levels of gas consumption make only two thirds of the levels in 1990 and 1991 (Mäe 2007: 102).

While all of Estonia's gas originates from Russia, in winter it is actually transported from Latvia. Domestic demand in Russia is high, so no gas flows from Russia to Estonia in winter. Latvia's underground natural gas reserve, Incukalns, provides the Baltic states with gas in winter (ibid.: 103). This gas comes from Russia and is stored during the summer time. The capacity at Incukalns has been expanded from 1.4 billion cubic meters in 1997 to 4.4 billion cubic meters in 2007 (Ibid.). The total infrastructural flow capacity to Estonia is about 11 million cubic meters, but the maximum used is only 6.5 million in the coldest periods of winter (ibid.: 102). Estonia's infrastructure is clearly capable of increasing gas imports to at least the levels of 1990 and 1991. The other remaining question is the cost and availability of gas.

Some have questioned whether Russia has the potential to meet the future demand (Mäe 2007: 106; Whist 2009: 103). Many have argued that Russia's large pipeline projects have increased its capacity to export gas, but the development of new gas fields has lagged behind. There is certainly some truth in this statement. The global financial crisis causes a global gas glut, but many expect the demand to peak up shortly, particularly the demand for LNG (White and Mason 2011). India, China, Japan, and of course Europe will all be seeking to increase their

gas consumption. On the other hand, new fracking techniques mean that the United States is covering all of its natural gas demands. It could even soon become a gas exporter (Economist 2011). This means that demand for LNG will rise, but not above production. Gas fields in Central Asia are being developed and should be able to supply gas to China. A China – Central Asia gas pipeline, which began exporting gas in 2009, will be joined by a second Beyneu – Shymkent, pipeline that will be operational in 2013 or 2014 (Watkins 2010). The two pipelines together will eventually have a capacity of 55 billion cubic meters of gas a year (ibid.). This is a large amount and has approximately the same capacity level as the Nord Stream gas pipeline.

With Central Asian gas going to China, Russia seems to be content with keeping Europe its primary customer. Russia has signed an agreement to send LNG to India and Japan. Even not including China's demand for gas, this represents a significant increase in demand for Russian gas. Still, recent developments seem to suggest that Russia will be able to meet this demand. Russia is set to start exporting gas from the Yamal Peninsula in June 2012 (Gazprom 2011). The Yamal Peninsula includes 11 different gas fields, including the Bovanenkovskoye field which has approximately 4.9 trillion cubic meters of gas (Gazprom 2012). According to Gazprom's projections, production could reach up to 360 billion cubic meters a year by 2030 (ibid.).

Given the developments on the Yamal Peninsula and the boom in natural gas development in the USA, the natural gas storage facilities in Latvia and the flow capacities in Estonia, it appears that Russia will be able to continue to produce gas for Estonia. Thus, if Estonia were to decide whether to increase gas imports from Russia, the ability of Russia to provide gas should not be the deciding factor. Another factor to take into consideration is the price of gas. Currently Estonia pays the lowest price for gas in the EU. Right now, Estonia pays 0.44 Euro for a cubic meter, Latvia pays 0.48, Finland 0.87, and Germany 0.93 (Kotov 2011). In addition to the cheap cost of gas, there would be no infrastructural cost of increasing gas imports from Russia. From the economic standpoint, the Russian gas can be seen as an important part of Estonia's energy portfolio. An increase in Russian gas import would qualify as bandwagoning according to our theory and analysis; since Estonia sees Russia as a threat, it would do just the opposite and balance away from the Russian gas.

Estonia balancing against Russia as an energy supplier

This section will analyze the Estonian energy policy and its attempts to decrease reliance on the Russian gas. The strongest indicators here are Estonia's domestic attempts at increasing energy production and diversification. Starting with oil shale, currently the government is planning investing into new expensive power plants that would be able to produce energy from oil shale much cleaner than the old power plants. This includes the Enefit 280 power plant which will be ready in 2012. This state-owned company and project will aim to turn oil shale energy into liquid oil that can be used in cars by 2016 (Enefit 2012). Eesti Energia has also signed a deal with the French construction company "Alstom" to build a new oil shale power plant worth 950 million Euros. The Estonian government declined to provide funding for the plant, but the state-owned energy company decided in June 2011 to press on with the project (ERR News 2011). The construction of these new power plants shows

the determination of Estonia to keep oil shale as the heart of Estonian energy production for the foreseeable future.

The second source of domestic energy that Estonia is heavily investing in is wind. Estonia has an ideal location for wind farms because of the many windy coastal areas. As wind farms are being constructed, the renewable energy made 9.7 % of the total energy consumption in 2010, with a goal of 15 % in 2015 (Elering 2012). While energy from biomass also plays a role in renewable energy, the main focus has been on the large number of wind farms in Western Estonia. In addition to wind and biomass, Estonia is also seriously considering nuclear energy. Nuclear power is a source that Estonia would like to invest in. While some countries in Europe are debating whether or not to continue to use nuclear power, Estonia is debating when, where, and how. There are two options; the first is to invest in Lithuania's planned nuclear power plant, which will replace the closed Ignalina power plant. The Lithuanian power plant has proven harder than expected to get going due to problems from the many different parties involved. Estonia, Latvia, and to some extent Poland, are interested in participating along with Lithuania. This causes problems as countries do not always have the same understandings in terms of foreign investors, the size of the power plant, and so on. Estonia has been disappointed in the pace of the progress, and in 2009 Prime Minister Ansip mentioned that Estonia might be interested in another option of building a small nuclear power plant in Estonia in cooperation with Finland (Bult 2010: 181).

In terms of Estonia's energy security, the most effective source of energy would be a different source of natural gas, not just different sources of electricity. Many residential or industrial units have heating burners that only burn gas (Mäe 2007: 107). Burners that use both gas and liquid fuel are costly and not required. While Eesti Energia does have a natural gas reserve in the Latvian natural gas storage, the need for a second source of gas remains high if Russia is a threat as a natural gas supplier. Estonia has also taken measures to invest in a liquefied natural gas (LNG) terminal in the Baltic states. An LNG terminal would be expensive and would need to involve large investors. A regional LNG terminal would cost some 375 million Euros to build and could serve the three Baltic states as well as Finland (Ummelas 2011). Logically speaking, Latvia would be the best location, given its geographic position and the existing natural gas storage facilities. This plan is not suitable for Estonia because the Incukalns storage facility is owned by Gazprom. Estonia claims that this would not benefit Estonia's energy security in a meaningful way (ibid.). Recently, Lithuania has contracted a floating LNG terminal that should be operational by 2014 (Socor 2012). Despite this move, the potential for a Baltic LNG terminal remains an option.

Estonia has also recently passed legislation regarding the privatization of the natural gas transition unit. This is in compliance with the EU regulations and will come into effect by 2015. The EU regulations did not need to be enforced until Estonia's gas market is integrated into the rest of Europe, but Estonia has decided not to wait (Ummelas 2012). The Estonian law will mean that Eesti gaas will not be able to have control of transmission, sales, and production. The major owner of Eesti gaas is Gazprom, which holds a 37-percent stake in the company (ibid.). This bill will reduce the power of Gazprom in the Estonian natural gas market and will make it easier to bring another source of natural gas into Estonia. Had Eesti gaas been in charge

of distribution, it could have decided to only let gas from Russia enter the system. Eesti gaas denies that its ownership of the distribution network poses a threat to other sources of natural gas (ibid.). This law is another example of how serious Estonia is in bringing in other sources of energy to complement and compete with Russian sources.

When looking at Estonia's balancing away from Russia as a supplier of natural gas, one of the most important aspects is also Estonia's relations with other states regarding energy consumption. In addition to cooperation with Latvia and Lithuania on large energy projects, Estonia has begun the process of integrating its electrical grid with Finland. The integration is based on two large underwater electrical cables that enable electricity to flow from Estonia to Finland and from Finland to Estonia. The first cable, Estlink 1, was completed in late 2006 and has is capable of delivering 350 MW of power. The second cable, Estlink 2, will have a power capacity of 650 MW, bringing the total transfer capacity to 1,000 MW. The Estlink 2 project will be finished in 2014 and will cost 320 million Euros (Fingrid 2010). Of this, the EU commission is paying 100 million as the EU has designated this project as strategically important.

Estonia's energy policy is consistent and clear – to reduce dependence on Russian natural gas and to increase or maintain domestic energy supplies. It has increased renewable energy sources, invested in oil shale, which will mean that Estonia will be able to produce a large amount of its energy needed domestically for the foreseeable future. It has also connected its energy grid with Finland, which will increase market prices and import capabilities if there were ever a need. The most important aspects of Estonia's energy security are the large energy projects which it is interested to invest in. A Baltic LNG terminal and a Baltic nuclear energy plant would increase the amount of energy produced and access to energy markets around the world. Although these large projects are not complete or even started, Estonia's serious intentions are evident. We can conclude that Estonia is indeed balancing away from Russia as an energy supplier.

CONCLUSIONS

Energy security is one of the most important security issues in the Baltic states today. The authors used Estonia for a case study to analyze how Estonia interprets other states as a threat to its energy security, and how it has acted according to that threat. Part of this analysis is unique to Estonia, particularly the portion on oil shale, but the findings can be useful for Latvia, Lithuania and other central European countries that depend on Russia as regards natural gas.

This article used Stephen Walt's balance of threat theory as a framework to understand whether Estonia sees Russia as a threat and whether Estonia is balancing against Russia as the theory would predict. Though the theory was born in the Cold War for military purposes, it was more than adequate in analyzing Estonia's energy security problems. This says something about the utility of this theory; perhaps it can be relevant in other situations as well. In the analysis, we saw that Russia's aggregate power, proximate power, offensive capabilities and offensive intentions are all very relevant in its relationship with Estonia as an energy provider. It is clear that, given Russia's relationship with Estonia and its difficult relationship with other countries in the region, Estonia sees Russia as a threat to its energy security.

According to the balance of threat theory, Estonia should then balance against Russia. When looking at the economics of the situation, increasing gas imports from Russia did not appear to be a bad idea. The low cost of gas and the existing infrastructure should have warranted the consideration. Since Russia has been perceived by Estonia as a threat, Estonia has taken measures to do just the opposite, i.e. to decrease imports from Russia. Just as the balance of theory predicted, Estonia has taken significant measures to balance against Russia. This has involved very expensive energy projects requiring new power plants, energy cables, wind parks, and potentially an LNG terminal or a nuclear power plant. These projects will cost billions but are deemed necessary by Estonia given Russia's status as a threat. Estonia's energy policy is more than just providing energy as cheaply as possible; it is to secure the supply and a steady price. Russia, as perceived by Estonia, cannot at the time provide this security.

This analysis has helped us to understand the reasons behind Estonia's energy policy. It has shed light on how resourceful Estonia is in diversifying its energy supply. While this article has focused solely on Estonia, its findings can be helpful in understanding small states in the region that are in similar situations. This study can also be helpful for Russia in understanding why some states view it as an unreliable energy supplier. Russia can also see to what lengths states go to avoid Russia as an energy supplier when they perceive Russia to be a risk. The balance of threat theory could perhaps be expanded to see if it is applicable in other areas of soft security.

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